



Case report

A case of self amputation of penis by cannabis induced psychosis

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ABSTRACT

Self-mutilation, self-injuring or self-harming behaviour has been defined as deliberate destruction or alteration of body tissue in the absence of conscious suicidal intention. Persons suffering from mental disorder may inflict hundred of small wounds upon themselves which may be added to the actual cause of death. Another recognized syndrome is self mutilation of genitals almost invariably in males suffering from paranoid schizophrenia and often with strong religious flavour to their delusion.

Here we present a case of a 35-year-old male who self mutilated his penis due to dependence on cannabis for the past few years that led to a condition called cannabis induced psychosis.

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1. Introduction

Self-mutilation, self-injuring or self-harming behavior has been defined as deliberate destruction or alteration of body tissue in the absence of conscious suicidal intention.¹ The incidence of self-mutilation is considerably more among women.^{2,3} Persons suffering from mental disorder may inflict hundred of small wounds upon themselves which may be add to the actual cause of death. Another recognized syndrome is self mutilation of genitals almost invariably in males suffering from paranoid schizophrenia and often with strong religious flavor to their delusion.⁴ Self-harming behavior runs in a spectrum from mild (e.g. skin picking and hair-pulling) to the more serious forms like self-cutting, extreme form like genital mutilation, self amputation and auto-nucleation. A common psychiatric association with self-harming behavior includes psychotic and mood disorders, dementia, borderline personality disorder, substance abuse and mental retardation. Patients with some syndromic conditions like the Cornelia DeLange, Prader–Willi and Lesch-Nyhan Syndromes are particularly prone to Self-mutilation. Aboseif et al in a study of 14 patients of self-inflicted genital injuries, found 65% of cases to be psychotic and 35% to be nonpsychotic.⁵

This report is an uncommon case of a man with self amputation of penis as a result of cannabis induced psychosis.

2. Case report

A 35-year-old male was brought by the police constable (C.P. No. 217) from police station Saron district Kanshi Ram Nagar to the emergency department of JNMCH Aligarh at 02:45 PM on 28th October 2011 with bleeding from genital area. As per the history narrated by the police the patient in a state of shock was found bleeding massively at a place some distance away from his village at 10:00 AM on 28th October 2011. He was all alone and in great pain. On examination it was found that whole of the penis was chopped off by a sharp cutting weapon from upside down. It was a clean cut incised wound with no hesitatonal cuts and the direction of the injury confirmed that the person was right handed. Weapon placed close to the abdominal wall, directed downwards, forward and slightly to the left leaving no stump of penis left intact. This led to an opening in the urinary bladder. Fig. 1.

Initially the patient was haemodynamically stabilized then a foleys catheter was put in the bladder to ensure proper urinary outflow.

Once again when police visited at around 6:00 PM on the same date at the scene of the incident a shaving knife used by barbers and an amputated penis was recovered. It took a long time by the police to recover and bring back the amputated penis to the hospital (12 h) from the time of incident therefore no attempt could be made to

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Fig. 1. Penile amputation with catheter in place.



Fig. 2. Bladder opening exposed with scrotum intact.

reconstruct the penis. The blood on the knife matched with that of the patient.

The patient accepted that he mutilated his penis in order to protect himself from the conspiracies going around him. The mental status examination at the time of admission revealed that he was disheveled, reduced psychomotor activity and anxious. He expressed the idea that his neighbors were planning to kill him. It was his penis which was sending electronic signal to them and they knew everything about what is going on his mind. He also accepted that he was hearing voices of God, and the voices commanded him to chop off his penis. He appeared perplexed, demonstrated intermittent eye contact and lacked insight into his mental health problem. There was no history of past psychiatric treatment but the family members reported that for the past few months the patient was talking irrelevant, was fearful for no reasons and was of belief that his neighbors are conspiring against him and planning to kill him. He was also muttering and talking to himself. Because of these symptoms he was taken to a faith healer but no psychiatric consultation was taken. He had been taking cannabis for the past few years and he believed that the use of cannabis would control his illness and also help him in meditation. Thus he continued on cannabis smoking. There was no history of mental illness in the family.

The genital injury was managed by emergency surgery team and the patient was advised risperidone 2 mg twice daily by the psychiatrist. On his first follow up, after 2 weeks, the family members reported marked improvement in his behavior. The patient denied any belief of neighbors conspiring against him. He also denied hearing of voices of god which he previously used to hear. During this period there was no history of cannabis intake. The patient came for second follow up one month after the first. During this period he reported poor compliance of drug intake. He was taking risperidone 2 mg tablets off and on but there was no history of cannabis intake during this period. The family members did not report any reversal of symptoms nor there was any delusion or hallucination on mental status examination.

Remission of symptoms within weeks and no relapse with poor compliance of antipsychotic medication suggest that the psychosis was primarily induced by cannabis. Fig. 2.

3. Discussion

Cannabis, also known as "marijuana", "marihuana", "hashish" and "ganja", is a psychoactive drug, which is forbidden in many

states. It is very prevalent in India. *Marijuana*, *hashish* and other psychoactive products obtained from *Cannabis sativa* are the most produced and trafficked illicit drugs around the world (CND, 2006).⁶ The effects that these compounds have on an individual brain have been addressed in several instances, such as religious practice, or simply in the search of pleasurable sensations. The genus *Cannabis* is composed of a single plant species, *C. sativa* Linn, classified by Linnaeus in 1753, based on specimens from India but with different shapes. The morphological characteristics, fiber production, oils or resins, and even the size, are so varied that botanical classification becomes very difficult (Astolfi et al., 1979).⁷ The potency of *cannabis* products is determined by its 9-THC content, usually given as a percentage of 9-THC (ElSohly et al., 2000).⁸ Cannabis contains about 421 different chemical compounds, including 61 cannabinoids (Turner et al., 1980).⁹ During the consumption by smoking, more than 2000 compounds can be produced by pyrolysis. Eighteen different classes of chemicals, including nitrogen compounds, amino acids, hydrocarbons, sugars and fatty acids can contribute to the single known pharmacological and toxicological properties of cannabinoids (Huestis, 2002).¹⁰

There is a close relationship between dopamine and self-mutilation. High doses of dopaminergic agonists, such as amphetamine, can engender self-mutilation. It is a well known fact that psychoactive substances (such as cocaine and cannabis) alter synaptic transmission by interacting with dopamine transporters, and that their dopaminergic action is one of their most important neurobiological properties. Role of dopaminergic system in mutilating behavior in rats has been reported by Gorea and Lombard.¹¹ The complex behavior associated with cannabis abuse may be the cause of self-mutilation. In animals, delta-9-tetrahydrocannabinol enhances dopaminergic neurotransmission in brain regions known to be implicated in psychosis. Studies in humans show that genetic vulnerability may add to increased risk of developing psychosis and cognitive impairments following cannabis consumption. Linszen D et al have reported the role of Delta-9-tetrahydrocannabinol in inducing psychotic like states and memory impairments in healthy volunteers.¹² Dysfunction of the inhibitory brain circuitry in drug addiction could explain why this patient lost control and mutilated himself following drug use.¹³

The consumption of cannabis products other than bhang, have been prohibited in India under NDPS Act, 1985. By doing so he may warrant imprisonment for a term of six months, or a fine which may

extend to ten thousand rupees, or both (NDPS Act, 1985).¹⁴ Different amendments of the act tried to prohibit the trading but no stress had been on its use in community. Cannabis is used regularly in different religious ceremonies and other social gatherings have made it impossible to ban in India. A strong policy or act is further needed and rather its implementation is required to avoid chronic addiction or habituation in the society which is prevalent from centuries.

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Conflict of interest

None.

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